Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Second Periodic Review of the	)	MB Docket No. 03-15
Commission's Rules and Policies	)	
Affecting the Conversion	)	RM 9832
To Digital Television	)	
	)	
Public Interest Obligations of TV	)	MM Docket No. 99-360
Broadcast Licensees	)	
	)	
Children's Television Obligations of	)	MM Docket No. 00-167
Digital Television Broadcasters	)	
	)	
Standardized and Enhanced Disclosure	)	MM Docket No. 00-168
Requirements for Television Broadcast Licensee	)	
Public Interest Obligations	)	

COMMENTS OF THE NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION

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The National Cable & Telecommunications Association ("NCTA"), by its attorneys, hereby submits its comments in the above-captioned proceeding. NCTA is the principal trade association of the cable television industry. Its members include owners and operators of cable television systems serving 90 percent of the nation's cable television customers as well as more than 200 cable program networks. NCTA also represents equipment suppliers and others interested in or affiliated with the cable television industry.

INTRODUCTION AND SUMMARY

The cable industry is moving full speed ahead in its roll-out of digital programming. Cable operators have invested more than $70 billion to create additional network capacity for the provision of digital services. Many cable operators have earmarked – and are already using –

part of their new digital spectrum to bring high definition and digital programming to customers in towns large and small throughout the United States.

Cable operators have invested approximately two billion dollars for each six MHz of newly created bandwidth. Operators need to manage this new digital capacity in ways that bring added value to consumers and help pay for this investment.

High definition programming offers something new and compelling to consumers who have television sets that can receive it. Research indicates that while consumer awareness of HDTV is growing, many consumers will not purchase a high definition television set until prices decline significantly. Nevertheless, the cable industry has committed to carry such high definition programming even during these early stages of the digital transition in order to encourage cable subscribers to purchase digital television sets.

Broadcast programming is a significant element of cable operators' current and planned high definition offerings to subscribers. Indeed, operators have offered to carry even more broadcast HD programming but, in a substantial number of cases, broadcasters have declined the offer and insisted that operators pay for the privilege of providing their part-time HD signals to cable subscribers. Broadcasters are, of course, not the only providers of high definition programming. Cable networks are making significant investments in high definition programming and are already the leading producers of HD – in some cases, on a 24/7 basis. Their programming plays a major role in cable operators' high definition offerings and in promoting the DTV transition.

The questions raised in the Notice of Proposed Rulemaking[1] with respect to how the transition will ultimately end serve to highlight that much remains to be done before the statutory "85 percent test" for returning analog spectrum can be met. One thing is clear: Cable carriage of broadcasters' digital signals will not help end the transition as long as households that rely on over-the-air television have no available means for viewing those signals. Research confirms that broadcast-only households are likely to be the last to purchase new digital television sets and are not likely to do so in the foreseeable future. This means that if the transition is to end, progress needs to made to provide affordable equipment for making over-the-air digital broadcast signals viewable on existing analog sets.

Cable operators are investing in and deploying equipment that makes it possible for their subscribers with analog sets to view signals that are transmitted to the home in digital and high-definition format. But equipment is needed for receiving and converting over-the-air digital signals so that they can be viewed on analog sets, and it appears that the broadcast industry is making little effort to ensure that consumers who rely on their over-the-air transmissions will be able to view their digital signals short of replacing the 80 million analog television sets that are currently not connected to cable or DBS.

When those viewers are equipped to receive digital signals so that, with the addition of cable subscribers, the 85 percent test can be met, cable operators will be prepared to carry broadcasters' digital signals in lieu of their analog signals so that the transition will come to an end. To the extent that the provisions of the statutory 85 percent test require interpretation, the Commission should interpret them in a reasonable manner that facilitates the transition.

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[1] Hereinafter "Notice" or "Periodic Review Notice."

Meanwhile, the Commission should not relieve broadcasters of simulcasting obligations during the transition. Those requirements are necessary both to expedite the transition and to ensure that it will be achieved in a manner that is not disruptive for viewers.

I. CABLE IS LEADING THE WAY IN DEPLOYING DIGITAL TECHNOLOGY AND SERVICES AND MAKING HIGH DEFINITION TELEVISION (HDTV) AVAILABLE TO CONSUMERS

The Notice seeks comment on the progress made by cable operators "in constructing facilities and deploying the equipment necessary to carry digital television programming, including HDTV."[2] And it asks for information about the extent to which cable operators are actually carrying or planning to carry the digital broadcast signals.[3]

On the facilities and equipment side, cable operators have been at the forefront of the digital revolution, investing more than $70 billion to transform their facilities into a platform for the provision of digital services. This amounts to approximately $2 billion for each 6 MHz of newly created bandwidth. These facilities make possible the provision of video services such as "digital tiers" of video programming, HDTV programming and video-on-demand, as well as non-video services such as high-speed Internet service, cable telephony and other advanced broadband services. For the time being, most of the original capacity on cable systems continues to be occupied by analog programming services (including broadcast channels), each of which requires a full 6 MHz channel. What's been added on upgraded 750 MHz systems is approximately 200 MHz of digital capacity, which must be allocated to those new digital video and non-video services that are most likely to appeal to consumers – and produce revenues sufficient to recover the costs of the massive facilities upgrades.

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2 Notice, ¶ 20.

3 Id.

For now, it's particularly costly to use scarce digital capacity to carry HDTV services because fewer than five percent of cable customers have television sets capable of receiving and displaying HD signals. Nevertheless, as we show below, cable operators are committed to carrying high-definition programming not only in order to meet growing demand for such programming but also to promote the transition to digital television. Where HD broadcast programming is readily available to them, cable operators are including it in the mix of HD programming being offered to cable customers. Indeed, operators have offered to carry even more broadcast HD programming, but, in many cases, broadcasters have refused to allow such carriage without being compensated.

A. The Number of Markets in Which Cable Provides HD is Rapidly Growing

A year ago, the cable industry enthusiastically embraced Chairman Powell's call for voluntary industry efforts to speed the digital transition.[4] The top 10 multiple system operators ("MSOs") on their systems in the top 100 television markets with 750 MHz activated bandwidth and 25,000 subscribers committed, by January 1, 2003, to offer to carry the signal of up to five digital broadcast stations (at no cost to the operator or the broadcaster) and/or cable program networks that provide a significant amount of high definition programming.[5] Operators also agreed to advertise and market their HD offerings to help spur consumer interest in these new products and to place orders for integrated HD set-top boxes. The cable industry has made significant progress on all fronts.

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[4] Letter from Robert Sachs, President, NCTA, to FCC Chairman Michael Powell, dated May 1, 2002.

[5] As part of this digital complement, the MSOs also may offer to carry other "value added DTV programming" that would create an incentive for consumers to purchase DTV sets. The offer also assumes that qualifying broadcast stations will deliver a good quality signal to the cable head-end.

As of March 1, 2003, high definition programming was offered in 73 of the top-100 markets by at least one cable operator.[6] Many of these markets have multiple cable operators bringing HD service to their customers. For example, in New York, the nation's top market, four MSOs – AOL Time Warner, Cablevision, Charter and Comcast – are all providing HD programming to customers. Likewise, in Indianapolis, the 25th largest television market, three different cable operators – AOL Time Warner, Comcast, and Insight – each have HD offerings.

The situation is similar in television markets below the top-100. Cable operators are driving their HD roll-out into smaller markets as well. Already, 103 markets overall have at least one cable operator providing high definition programming.[7] Cable customers in communities as small as Elmira, New York and Ottumwa, Iowa, can view high definition via cable today. And it is not just the ten largest MSOs that have embraced HDTV. Smaller cable operators – such as Armstrong and Susquehanna Cable – offer HD programming choices for their customers. By March 2003, more than 45 million households were passed by cable systems that offer HD programming. This number will continue to grow, as it has over the past year. For example, in January and February of this year, cable systems introduced HD service into nine new top-100 markets. During that period, the number of television households served by a cable operator offering HD grew by 20 percent. Seven and one-half million more television households had HD available to them via cable in March than just two months before, at year-end 2002.

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6 NCTA member research.

7 Data as of Mar. 11, 2003.

B. Carriage of HD Broadcast Signals Is a Significant Element of Cable's HD Offerings

Like all providers of entertainment and information, cable operators must choose the optimum mix of services to offer consumers. Only a limited amount of space is available for HD programming. Such programming occupies at least several times as much bandwidth as standard definition digital programming services. And it can only be enjoyed by the growing, but still small, percentage of consumers who own high definition television sets. Accordingly, cable operators must make choices among the programming services available today in high definition.

Broadcast HD programming is often part of the package of high definition services provided by cable operators – but only, of course, in those communities where broadcasters are even transmitting HD programming on their digital channels.

Many broadcast stations aren't even on the air in digital today.[8] But of those that are, most digital broadcasters are not transmitting any high definition programming.[9] They instead offer standard definition versions of analog signals already carried on the cable system. This, of course, gives consumers little more than they already receive by virtue of very good quality analog signals. In many cases, these digital stations are on the air for less than a handful of hours a day.[10] Other digital stations may fail to deliver a good quality signal to the cable head-end.

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[8] According to the FCC's website, 843 commercial stations requested a first extension of their build-out deadline; 602 commercial stations have requested a second extension. www.fcc.gov (information as of March 12, 2003). Although non-commercial stations have until May 2003 to build DTV facilities, 192 have already requested a first extension. Id.

[9] According to NCTA research, about 400 of the digital stations on the air today are not offering HD digital programming. Even those that offer HDTV offer it on a very part-time basis.

[10] See, e.g., Paxson Communications Corp., Request for Temporary Waiver of Section 73.624(f) of the Commission's Rules, (filed Apr. 1, 2003) at 3 (explaining that the FCC's simulcasting rule, to the extent that it requires broadcasters to keep their digital signal on the air for 50 percent of the time that it broadcasts in analog,

(Footnote continued.)

Nevertheless, broadcast HD programming is already being provided to cable customers in 43 of the 73 top-100 markets where HD is offered.[11] In those markets, as documented in Attachment A to these comments, cable systems carry a total of more than 124 different digital television stations – including 24 non-commercial digital television stations. Those stations that broadcast in an HD format are being carried in HD on those cable systems.[12]

Cable operators want to carry even more broadcast HD programming. In connection with their "Powell Plan" commitment, MSOs reached out to broadcasters throughout the top-100 markets to ascertain whether and how much programming they were transmitting in HD. Operators followed up, in hundreds of cases, with offers to carry stations that were providing a meaningful amount of HD programming.[13]

But in a significant number of cases, broadcasters have turned down operators' offers, choosing instead to demand compensation for carriage of their part-time HD signals.[14] Requiring compensation for carriage of broadcast HD signals represents a significant departure from the Powell plan,[15] which called upon cable operators to offer to carry digital signals "at no cost."

"will represent a four-fold increase in Paxson's DTV stations' operating schedule, with corresponding increases in the stations' operating costs").

[11] NCTA data, as of March 1, 2003.

[12] The Notice asks "if these digital signals are in HDTV format, are they being passed through in HDTV, or are they being converted to another digital format, or to analog?" Notice at ¶ 20. Cable operators already carry the analog version of these stations, so the HD signal is carried in HD in addition to the analog signal. While HD signals are transmitted over the air in 8 VSB, cable systems use QAM modulation when they distribute digital programming over their systems. To our knowledge, the HD format, however, remains the same in all cases (e.g., a broadcaster's 1080i HD signal is provided to cable customers in 1080i).

[13] Based on NCTA research.

[14] See, e.g., "Digital Dilemma Mounting over HDTV," Indianapolis Business Journal (Feb. 4, 2003) (quoting local station general managers: "We spent a lot of money building and maintaining our digital system, and we think it has some value… They're going to turn it around and sell it to their customers, after all."; "What's it worth to them to get our programming?").

[15] Released April 1, 2002.

The top ten cable operators agreed to offer to carry "the signal of up to five digital commercial or public television stations (at no cost to cable operators or broadcasters)."[16]

The decision of some broadcasters to withhold consent for cable carriage of their digital signals is their right, but it lays bare the claim that cable systems are acting as "gatekeepers" who are somehow preventing broadcasters' HD programming from reaching cable customers.[17] In any event, even without having broadcast HD signals available to them in all markets, cable operators are moving forward to make high quality HD programming available to cable customers. As described below, cable program networks are the leading producers of HD programming, and they offer some of the most attractive programming for HD viewing today.

C. Cable Program Networks Are the Leading Producers of HD Programming

Cable customers can choose from a range of HD cable program networks. Some of the most popular cable programming genres – including movies and sports – are being offered in high definition. And unlike broadcast stations, which provide less than a handful of hours of HD programming daily,[18] many cable networks are offering HD for all – or virtually all – of their programming day.

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[16] Generally, cable operators provide digital broadcast signals at no additional cost to their customers, other than for HD digital set-top boxes, which are necessary to receive HD programming.

[17] See "Industry Leaders Remain Far Apart on DTV Transition," Communications Daily, March 11, 2003, p.4 (quoting NAB President Eddie Fritts).

[18] For example, ABC offers about 13 hours a week of HD programming in prime time. "ABC and Zenith Announce Major HDTV Partnership for 2002-03 Prime Time Programming," ABC Television Network Release (Aug. 28, 2002). NBC provides only about 60 percent of its prime time and late night programming in HD, along with some special events, movies and sports. Testimony of Robert C. Wright, President & CEO, National Broadcasting Company, Inc., Staff Discussion Draft on the Transition to Digital Television: Hearing Before the Subcommittee on Telecommunications and the Internet of the House Committee on Energy and Commerce, Serial No. 107-141, 107th Cong. 2d. Sess. 34 (Sept. 25, 2002). FOX offers an "enhanced definition" digital format, UPN does not provide HD programming, and The WB Network has only a few hours of HD programming each week. "HDTV's Acceptance Picks Up Pace As Prices Drop and Networks Sign On," The New York Times, (Mar. 31, 2003) at C1-C3.

For example, HBO and Showtime have been at the forefront of offering a wide variety of their popular programming in HD. Seventy percent of HBO's programming is provided in HD.[19] Showtime provides most original movies in HD, as well as many of its original series.[20] Discovery HD Theater features 24 hours daily of Discovery's most popular programming in high definition.

HD sports offerings on cable – which some consider to be "perhaps the technology's most compelling application"[21] – also are gaining momentum. Madison Square Garden Network offers many of the New York teams' home games in high definition. Comcast SportsNet in early 2003 began offering more than 200 professional sporting events annually in HD. And ESPN, last month, launched a full-time HD channel. It "plans to carry 100 professional baseball, hockey and football games in the next year in the HDTV format, while 'upconverting' all of ESPN's other programming to the technical equivalent of HDTV."[22]

Movies are another popular category of cable HD programming. In addition to HBO and Showtime's HD movie offerings, Cinemax HD is scheduled to make its debut later this year.[23] Bravo, too, intends to begin HD service.[24] Also in 2003, inDemand, which supplies video-on-demand programming, will begin rolling out certain movies in HD.[25]

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[19] Id.

[20] "Showtime Boosts HDTV Offerings," Multichannel News Online, Feb. 10, 2003.

[21] "HDTV's Acceptance Picks Up Pace as Prices Drop and Networks Sign On," The New York Times, (Mar. 31, 2003).

[22] Id.

[23] "Networks Take Varied HD Path," Multichannel News, Dec. 9, 2002.

[24] "NBC Prepping Bravo HD Net," Multichannel News, Jan. 13, 2003.

[25] "InDemand to Offer HDTV VOD," Multichannel News Online, Feb. 10, 2003.

In sum, the cable industry has made significant progress in providing HDTV and will continue to roll out HD in more markets. All signs are that interest in HD among cable subscribers is growing and will continue to grow as the amount and variety of HD programming expands and prices on HD sets fall.[26] Cable operators want to provide compelling content from broadcasters and cable networks alike to cable consumers to help advance the digital transition.

II. THE TRANSITION CANNOT BE COMPLETED UNTIL NON-CABLE HOUSEHOLDS ARE CAPABLE OF RECEIVING DIGITAL BROADCAST SIGNALS

While the cable industry has made significant strides in its HD roll-out, it may take many years to get from these initial stages of the digital transition to a point where a complete switch-over can occur so that analog spectrum used by broadcasters is returned to the government.

As the Periodic Review Notice points out, the spectrum return date, codified in Section 309(j)(14) of the Communications Act, requires broadcasters to cease broadcasting in analog by December 31, 2006. However, that date can be extended in any market where a broadcaster seeks a waiver under one of three tests. The Notice identifies several interpretive issues regarding each of these tests.[27] The proper interpretation of one of those tests – the "85 percent"

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[26] The Consumer Electronics Association reports that factory-to-dealer sales of DTV products in 2002 "totaled 2,487,502 units and $4,210,151,531" – an increase of 73% in units and 61% in dollars over the previous year's figures. CEA Press Release, January 27, 2003, www.ce.org/press_room/press_release_detail.asp?id=10155. See also "HDTV – At What Price," CTAM Pulse, www.ctam.com (hereinafter "CTAM Pulse").

[27] One of those tests delays the transition if "digital-to-analog converter technology is not generally available in [the] market." 47 U.S.C. § 309(j)(14)(B)(ii). The Notice asks several questions regarding how widespread availability must be in order to avoid an extension under this test. But the Notice places undue emphasis on the availability of a digital converter box for cable customers. See Notice at ¶83 ("should we require only that digital-to-analog converter boxes be available for sale at retail outlets in the market or for sale or lease from cable operators or satellite providers?"; "What if cable systems in the market are providing signals downconverted from digital to analog at the cable headend so that a digital-to-analog converter is not necessary to view DTV signals?") Making sure that digital-to-analog technology is available to enable cable subscribers to view digital signals on analog television sets will not be a problem. Cable operators have already deployed some 30 million digital set-top boxes, which function today to make digital television signals viewable on an analog set. By

(Footnote continued.)

test – is, however, most critical to determining whether the transition can realistically be expected to end in any given market and analog spectrum returned.

The 85 percent test provides that a broadcaster can request an extension of the 2006 analog return date in any market where:

> 15 percent or more of the television households in such market (I) do not subscribe to a multichannel video programming distributor … that carries one of the digital television service programming channels of each of the television stations broadcasting such a channel in such market; and (II) do not have either – (a) at least one television receiver capable of receiving the digital television service signals of the television stations licensed in such market; or (b) at least one television receiver of analog television service signals equipped with digital-to-analog converter technology capable of receiving the digital television service signals of the television stations licensed in such market.[28]

The one thing that is clear is that, under this test, cable carriage of digital broadcast signals is not the key to ending the transition. Other pieces of the puzzle – which have nothing to do with cable – have to be in place before cable carriage would put most markets over the 85 percent threshold. Specifically, until equipment is readily and economically available to enable over-the-air viewers to receive and watch digital signals, the test cannot be met.

Progress is being made to ensure that cable viewers will be able to view digital signals carried by cable systems. Already nearly 30 million digital converter devices have been deployed. When the requisite number of over-the-air households can receive digital signals, cable operators will be prepared to transition to digital broadcast carriage.

December 31, 2006 – long before the transition is likely to end – it is estimated that 49.3 million digital set-top boxes will be in cable customers' homes. See Kagan World Media, "Broadband Technology," Feb. 13, 2003, p. 2. The missing link in the DTV transition is the lack of digital to analog converters for over-the-air viewers. These consumers will also require a digital antenna. These are the very consumers who will be stranded without any television service once analog spectrum is returned unless they buy a new television set. See discussion, infra at 16-17.

[28] 47 U.S.C. § 309(j)(14)(b).

The Commission should interpret the provisions of the 85 percent test in a manner, at least insofar as cable's carriage of digital signals is concerned, to ensure that this can occur. The Notice identifies several interpretive issues regarding the statutory language. For the most part, the issue in each case is whether the test must be interpreted in a manner that makes it unlikely that it can ever be met, or whether the Commission can take an approach that makes it more likely that the transition will come to an end and the analog spectrum will be returned.[29] In each case, the Commission can and should opt for the latter approach.

A. Cable Carriage Alone of Digital Signals is Not Sufficient to Trigger the 85 Percent Test

Simple math shows why cable carriage alone is insufficient to bring about the return of analog spectrum. Cable systems overall serve about 70 percent of the television households in the United States.[30] This means that cable carriage alone of digital signals cannot end the transition. The real key to the return of the analog spectrum, then, is in the 33 million TV households that cable operators do not serve and whose behavior is not influenced by whatever cable operators do. Half of these TV households must have some means of receiving broadcast digital signals before the 85 percent test can be met.[31]

Even if every cable system were to substitute carriage of every station's digital broadcast signal for its analog broadcast signal tomorrow,[32] the transition would not end unless an

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[29] Notice at ¶¶ 85-87.

[30] Based on Nielsen data, cable penetration as of February 2003 is 68.9 percent.

[31] If cable only reaches 69% of the nation's 107 million television households, the 85 percent level cannot be reached, even if all cable subscribers are counted, unless more than half of the remaining 31% – i.e., an additional 16% (approximately 17 million households) – qualify as well.

[32] This calculation assumes, arguendo, that the Commission interprets the Balanced Budget Act to count toward the 85 percent threshold cable customers that may not have the means to view digital signals prior to the transition's end but merely subscribe to a cable system that carries those signals.

additional 17 million households – basically half of non-cable homes – took steps to obtain the equipment necessary to receive digital signals on at least one of their television sets.

Some of these households are served by DBS. But DirecTV and EchoStar today provide local analog broadcast signals in fewer than one-third of the nation's television markets. And even in those markets, not all DBS customers choose to receive local television stations from their satellite provider.

The remainder of these non-cable households receive television signals over-the-air. The transition cannot end before most over-the-air households have the means to receive digital signals. These consumers, unlike cable and DBS households, will be completely stranded without any television service if the transition ends before they have the ability to receive digital broadcast signals. Getting to a point where half these viewers have the means to view digital signals over-the-air is critical to the spectrum's return.

1. Reliance on the Eventual Purchase of New Television Sets By Over-the-Air Households Is Insufficient

The National Association of Broadcasters ("NAB") estimates that nearly 21 percent of all television households nationwide are over-the-air viewers.[33] In order to continue to receive over-the-air television once the analog spectrum is returned, these viewers must buy new television sets capable of receiving digital signals, or obtain digital-to-analog converters so that they can view digital signals on their analog sets. There are obvious challenges to getting to that point.

Not the least of these obstacles is the price of digital television sets. DTV sets, for the foreseeable future, will be high-end purchases. Although sales of HDTV and digital sets

[33] Comments of the National Association of Broadcasters, CS Docket No. 01-129 (filed Aug. 3, 2001) at 3 (based on data from Home Technology Report and Nielsen) (hereinafter "NAB Comments").

(mostly, sets without over-the-air tuners) are rapidly increasing,[34] a study recently released by the Cable & Telecommunications Association for Marketing ("CTAM") indicates that many consumers remain confused about how to receive high definition programming and, in any case, will not be interested in purchasing such sets until prices come down significantly.[35] And, as might be expected, over-the-air households – which, according to NAB's 2001 data, are predominantly lower-income households[36] – have the least interest in buying expensive new digital television sets.

CTAM's survey of more than 1,000 television households found that even if the price of an HDTV set dropped to $300, nearly a quarter (23%) of the respondents would still be "not at all likely" to buy one in the next three years. Another 6% reported that it was "not very likely" that they would buy an HD set at that price.[37]

Over-the-air viewers were even less interested – much less interested – in purchasing an HD set. The price of HD sets could fall to as low as $300, and 44% of these viewers would still be "not at all likely" to purchase one. An additional 8% would be "not very likely" to purchase an HD set at that price.

The Commission's requirement that manufacturers include digital tuners in all television sets may eventually make lower-cost sets available to over-the-air households. But that phased-in requirement, which will start in July 2004 with the largest, most expensive sets,

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[34] Approximately 4.9 million HDTV-capable sets have been sold. But only about 640,000 have been purchased with a built-in tuner or add-on decoder box required for receiving an HDTV broadcast. See "HDTV's Acceptance Picks Up Pace As Prices Drop and Networks Sign On," The New York Times, (Mar. 31, 2003), p. C-1.

[35] CTAM Pulse, www.ctam.com.

[36] NAB Comments at 3.

[37] CTAM Pulse, supra.

will not cover all sets larger than 13 inches until July 2007. And, in any event, if over-the-air households currently have little interest in buying an HD set even at prices as low as $300, how likely are they to replace their existing sets with new analog television sets just because the sets have digital tuners?

2. At Least Eighty Million Analog Sets Will Be Made Obsolete If the Only Solution is to Purchase New Television Sets

Simply focusing on the purchase on new television sets does not tell the whole story about obstacles to return of the analog spectrum. According to NAB's 2001 data, about 81 million analog television sets – nearly a third of all television sets in the U.S. – are not connected to any multichannel video programming distributor.[38] This total includes television sets in over-the-air-only homes as well as sets in households that subscribe to a MVPD but are not connected to the MVPD's service.

Despite digital television stations coming on the air, analog television set sales have continued to be brisk. An additional 18 million were sold in 2002, and CEA predicts a total of 70 million more will be sold by the end of 2006.[39] Many of these sets undoubtedly will end up in over-the-air only homes.

If the exclusive solution for over-the-air viewers is to purchase a new set with a digital tuner, all these existing analog sets will be rendered obsolete. To avoid stranding all these analog television viewers in over-the-air homes, devices to enable them to continue using their analog sets must be developed. Otherwise, it is unrealistic to expect analog spectrum to be returned.

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[38] NAB Comments at 2.

[39] Source: eBrain Market Research.

Cable's technology for transmitting digital programming differs from that used by the broadcasters. Thus, the solution to making digital signals available to over-the-air viewers with analog sets will differ from solutions cable operators are developing for providing digital signals to their customers with analog sets. But, to date, there is little public evidence that the broadcast industry is working with consumer electronics manufacturers on over-the-air solutions. Over-the-air households must have reasonable and affordable options for viewing digital signals before the transition can end.

B. Cable Systems Will Be Ready To Transition to Digital Broadcast Carriage Whenever the Requisite Number of Non-Cable Households are Capable of Receiving Digital Signals

Cable operators have actively invested in, developed and deployed technologies and equipment to enable their customers to enjoy the benefits of digital television, even if they have not purchased a new digital television set. Cable operators offer tiers of digital signals which, when used with a digital set-top box, can be viewed by their customers on their analog television sets. As of December 2002, nearly 30 percent of cable customers subscribed to digital tiers of service.[40] By the end of 2003, Kagan predicts an installed base of nearly 33 million digital set-top boxes in cable customers' homes, including homes with multiple boxes.[41] For consumers with HD-ready digital sets, cable operators have available HD set-top boxes. By the end of 2006, the number of digital boxes already in customers' homes is expected to increase to 49.3 million.[42] As a whole, cable systems are making significant progress to prepare their customers

[40] Kagan World Media, "Broadband Technology," Feb. 13, 2003, p. 2.

[41] Id. at 3.

[42] Id.

for the time when they may need new or additional equipment to view programming otherwise unavailable on their analog sets.

Once a sufficient number of non-cable customers are readily able to receive digital signals so that, with the addition of cable subscribers, the 85 percent test is met in most communities, cable operators will be ready to substitute carriage of broadcasters' digital signals for the analog signals currently being carried. At that point, the test will be met, and the analog spectrum can be returned for public service and wireless needs.

Prematurely requiring cable carriage of all digital broadcast signals in the vain hope of reaching the 85 percent threshold before over-the-air viewers have invested in the equipment to receive such signals is a fundamentally backwards way of achieving the broadcasters' digital transition. It would simply require the consumption of limited cable capacity, denying consumers the choice of new programming, for an indefinite period. And it would remove any incentive that broadcasters might have to create more high definition programming or high-value digital content to prompt carriage.

C. The 85 Percent Test Should Be Interpreted So That it is Possible to Meet

To the extent that the statutory language permits, the FCC should interpret the 85 percent test in ways that make the cable switch-over feasible, once a sufficient number of non-cable customers have made the investment in their digital reception equipment. Interpreting the statute in this fashion is consistent with Congress' intent in modifying the 2006 target date for the analog spectrum's return to permit broadcasters to seek extensions. Congress attempted to ensure through adopting this test that significant numbers of analog viewers were not stranded

without broadcast television service.[43] While the 85 percent test was thus not designed to expedite the digital transition, Congress certainly expected that that, at some point, the transition would end and broadcasters would give back their second channel of free spectrum. The answers to the Notice's interpretive questions, therefore, should be guided by the need to expedite the transition without disenfranchising viewers.

1. The Commission Should Interpret "Broadcast Stations" In a "Market" to Mean Only Those That Would Qualify for Mandatory Carriage Rights

For example, the Periodic Review Notice asks how to interpret the ambiguous language that speaks to MVPD carriage of "one of the digital television service programming channels of each of the television stations broadcasting such a channel in such market."[44] The Notice expresses concern that "read literally," this provision could set up a test that "would be rarely satisfied in a market."[45]

Cable operators may not carry every analog television station transmitting in a given market for a variety of reasons. For example, operators are not required to carry stations that fail to deliver a good quality signal to the headend.[46] Nor are operators required to carry television stations that substantially duplicate the signal of another station.[47] They are also not required to

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[43] Balanced Budget Act of 1997, 105th Cong. 1st Sess., Conf. Rep. 105-217 (1997) at 576-577. ("[T]o ensure that a significant number of consumers in any given market are not left without broadcast television service as of January 1, 2007, the conference agreement includes new section 309(j)(14)(B) of the Communications Act which requires the Commission to grant extensions to any station in any television market if any one of the … three conditions exist.")

[44] 47 U.S.C. § 309(j)(14)(B)(iii)(I). Notice at ¶ 85.

[45] Notice at id.

[46] 47 U.S.C. § 614 (h)(1)(B)(iii).

[47] Id., § 614(b)(4).

carry all low power or translator stations. And they may petition to modify a station's market for purposes of the must carry requirements to exclude a station from carriage.[48]

The Commission should interpret "television stations in a market" to avoid setting up a test that may be virtually impossible to meet. The term should be construed to encompass only those stations that qualify for carriage on that particular cable system under the analog must carry rules. In that fashion, when a system replaces the analog broadcast signals that it is carrying with the corresponding digital signals, that system's subscribers will count toward fulfillment of the 85 percent test.

2. Carriage of Digital Signals in Analog Should Count Towards the 85 Percent Test

At the end of the transition, cable operators will need flexibility to continue to accommodate the differing needs of their customers. At this point in time, it is difficult to predict whether every operator will be able to or want to provide only digital television signals to their customers. For instance, the number of over-the-air stations in markets varies from as few as 1 to as many as 25. As the Notice suggests, some operators may choose to downconvert digital signals to analog at the headend.[49]

The 85 percent test counts households that subscribe to a cable system that "carries" one of the digital channels of each broadcast station but does not specify how such channels are to be carried. It is therefore permissible – and desirable – to treat digital signals that are downconverted and carried on a system in analog format as "carried" for purposes of the test, so that subscribers to that system will count towards the 85 percent threshold. This interpretation

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[48] Id., § 614(h)(1)(C).

[49] Id. at ¶ 89.

will help expedite return of the spectrum and provide cable operators with the flexibility they need to best serve their customers.

3. The Commission Should Periodically Review the Progress of Non-Cable Customers to Ascertain their Digital Adoption Rate

As discussed above, cable systems will be prepared to carry broadcasters' digital signals when a sufficient number of non-cable households are equipped to receive digital television so that, with cable carriage, the 85 percent test will be triggered. Cable operators will, however, need a reasonable amount of advance notice that the time for implementing the substitution of digital for analog broadcast signals is approaching. Therefore, if the initial survey (whether conducted by the FCC or the local broadcaster[50]) shows that the 85 percent test is not met in time for the December 31, 2006 deadline, the Commission should establish now that additional periodic surveys will be conducted. As part of these surveys, penetration in broadcast-only homes of equipment used to receive digital signals should be measured.

III. THE FCC SHOULD MAINTAIN SIMULCASTING OBLIGATIONS

FCC rules provide broadcasters tremendous flexibility to experiment with their digital spectrum. And the FCC has been sensitive to the broadcasters' plea for longer periods to construct and begin operation of their DTV facilities. The FCC has also shown concern for the costs that operating two facilities will impose on broadcasters, permitting digital stations to operate at lower power – and for minimal hours – in order to save electricity costs.

Most fundamentally, the Commission does not require broadcasters to provide any HD programming at all. Broadcasters won great freedom to experiment with their digital spectrum.

[50] See id. at ¶¶ 93-94.

Among other things, they can transmit multiple streams of digital signals, or use the digital spectrum for non-broadcast uses, or charge viewers to receive their digital programming.

One of the very few remaining requirements as to the content of these digital signals is the simulcasting obligation. At least one digital stream not only must be provided free over-the-air but also must "simulcast" the same programming that the broadcaster carries on the analog channel. The Notice now asks whether this simulcasting obligation, too, should be jettisoned.[51] This requirement captures the original intent behind granting broadcasters digital spectrum and remains necessary to ensure a smooth transition. Now is not the time to pull back on FCC requirements designed to assist in spurring broadcasters to a day when the analog spectrum can be returned.

A. The Simulcasting Rule Still Serves the Important Purpose of Facilitating the Transition

The simulcasting requirement provides that broadcasters must offer a percentage of their analog programming on the digital channel beginning April 1, 2003, with progressively greater amounts required to be simulcast over the next two years.[52] This requirement remains necessary to ensure an expeditious, non-disruptive transition from analog to digital television for analog viewers.

From the very start, the "advanced television" service – then intended to be high definition – was to be "simulcast" with the existing NTSC service.[53] The Commission made

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[51] Id. at ¶ 66.

[52] 47 C.F.R. §73.624(f)(1) (requiring DTV licensees to simulcast 50 percent of the video programming of the analog channel on the DTV channel by April 1, 2003; 75 percent by April 1, 2004; and 100 percent by April 1, 2005).

[53] Advanced Television Systems and Their Impact on the Existing Television Broadcast Service, MM Docket No. 870268, 5 FCC Rcd. 5627 n.1 (1990) (selecting a "simulcast" HDTV system, defined as "the broadcast of one program over two channels to the same area at the same time").

clear at the beginning of this transition that broadcasters were awarded this additional swath of 6 MHz of free spectrum for purposes of making the transition to an all-digital program service. It was never intended to be used to develop a second, separate programming service.[54]

The FCC has repeatedly reexamined and reaffirmed the need for a simulcasting rule. It has twice set aside broadcasters' requests for additional relief from this obligation, emphasizing that interim benchmarks for increasing levels of simulcasting were necessary:

> [R]eceipt of additional revenues from this second channel, like use of the channel itself, is transitional only, terminating at the point of conversion.… We intend to ensure that the path to the final conversion to ATV is as direct and unaffected by collateral factors as possible. To do so, we must adopt measures that ensure that, as the ATV transition progresses, broadcasters do not disproportionately rely on revenues from their second channel, that significant numbers of viewers do not come to expect a second channel of completely differentiated programming, and that the increasingly smaller number of NTSC-only viewers are not abruptly disenfranchised.[55]

The Commission rebuffed yet another attempt by the National Association of Broadcasters to eliminate simulcasting obligations five years later, explaining:

> while we believe that a simulcast requirement is not warranted during the early years of the transition, there are benefits to a simulcast requirement near the end of the transition period. Such a requirement will help ensure that consumers will enjoy continuity of free over-the-air program service when we reclaim the analog spectrum at the conclusion of the transition period. It may be difficult to terminate analog broadcast service if broadcasters show programs on their analog channels but not on their digital channels.[56]

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[54] Second Report and Order/Further Notice of Proposed Rulemaking, 7 FCC Rcd. 3340, 3355 (1992) ("We underscore that ATV is not a separate television service and will not result in the permanent grant of two 6 MHz channels to existing broadcasters. We intend to reclaim the reversion channel as soon as possible. Requiring simulcasting will help us to do so by minimizing broadcaster and consumer reliance on the ATV channel as a separately programmed service.") (emphasis supplied).

[55] Memorandum Opinion and Order/Third Report and Order/Third Further Notice of Proposed Rulemaking, 7 FCC Rcd. 6924, 6976 (1992) (emphasis supplied). At the time it committed to this path, the Commission set forth a high standard for changing it: "we will modify our simulcast timetable only upon a substantial showing that such change furthers the public interest." Id. at 6978.

[56] Fifth Report and Order, 12 FCC Rcd. 12809, 12833 (1997) (emphasis supplied).

The logic of requiring simulcasting has not changed.

B. Simulcasting Remains Necessary for a Smooth Transition

The simulcasting requirement should remain, and not simply because it was a significant part of the original plan that led to broadcasters obtaining a second 6 MHz of scarce spectrum. The obligation still serves the purpose of facilitating a smooth transition to digital for analog viewers. This is true for cable and over-the-air viewers alike.

Removing the simulcasting requirement would provide broadcasters with an additional program stream – and every incentive to maintain that separate service indefinitely. Broadcasters would have little reason to hasten the return of spectrum that enabled them to run a second program service under these circumstances. As a practical matter, an expectation would build on the part of broadcasters to operate their analog channel as a second service. It would become increasingly difficult to reclaim the second channel.

Aside from broadcasters' obvious disinterest in shedding a second program service, creation of a differentiated program service will make it difficult to speed the transition for cable customers. As the transition's end nears, it may become efficient and feasible for operators to carry broadcasters' digital signals in lieu of the analog signals in a manner that enables customers to view the broadcast programming on an analog or digital set. If programming on the digital signal differs from that on the analog signal, taking this course will be much more difficult. Analog customers would be concerned about losing programming that they are accustomed to seeing. Additional consumer resistance to making the switch to digital could grow.

Broadcasters have had many years of complete freedom to experiment with digital spectrum uses. They will continue to have the flexibility to incorporate new features into their

digital program not possible on their analog channel and to explore other uses of their digital spectrum. Given the flexibility already afforded broadcasters for using their digital spectrum, there is no reason to erect additional obstacles to the spectrum return.[57]

CONCLUSION

The cable industry has made a massive investment in facilities, equipment and programming to provide compelling digital programming to the nation's 73.5 million cable

[57] The Periodic Review Notice proposes to define "simulcasting" as "within a 24-hour period, the broadcast on a digital channel of the same programming broadcast on the analog channel, excluding commercials and promotions and allowing for enhanced features and services." Given this liberal view of programming that would qualify as "simulcasting," the Notice also asks "how simulcast requirements and the definition of 'simulcasting' relate to the substantial duplication decisions in the must carry portions of the act." So far as we are aware, this issue would only arise if the Commission were to grant must carry rights to digital signals during (Footnote continued.)

homes. And cable operators will be fully prepared to carry broadcasters' digital signals in lieu of their analog signals so that the 85 percent test can be met and the transition brought to a close. But while cable will be ready for transition's end, and is helping to create demand for digital television sets that will hasten that moment, there must be affordable equipment available to enable over-the-air viewers to receive digital broadcast signals. The broadcast industry has demonstrated little progress in this regard.

Bringing an end to the transition also calls for the FCC to interpret aspects of the 85 percent test in a common-sense manner that does not make the test impossible to meet. Likewise, the FCC should maintain its simulcasting requirement in order to hasten, not prolong, the transition's duration.

Respectfully submitted,

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the transition period. The FCC has granted no such rights. And NCTA has previously demonstrated why that is the correct decision. See NCTA Comments and Reply Comments CS Docket No. 98-120.

ATTACHMENT A

HDTV and Digital Broadcast Stations Being Carried in DMA
As of March 11, 2003

DMA	BROADCAST CARRIAGE
NEW YORK	ABC – WABC NBC – WNBC CBS – WCBS FOX – WNYW PBS – WNET UPN – WWOR
LOS ANGELES	ABC – KABC NBC – KNBC CBS – KCBS FOX – KTTV PBS – KCET
CHICAGO	ABC - WLS FOX - WFLD NBC - WMAQ
PHILADELPHIA	ABC – WPVI NBC – WCAU CBS – KYW FOX – WTXF PBS – WHYY
BOSTON	ABC - WCVB NBC - WHDH PBS - WGBH
WASHINGTON, DC	ABC - WJLA NBC - WRC CBS - WUSA PBS - WETA
DETROIT	NBC – WDIV ABC – WXYZ PBS - WTVS
HOUSTON	ABC – KTRK NBC – KPRC CBS – KHOU FOX – KRIV PBS – KUHT
TAMPA - ST. PETE	ABC - WFTS CBS - WTSP FOX – WTVT
MINNEAPOLIS- ST. PAUL	CBS – WCCO FOX – KMSP PBS – KTCI UPN – WFTC
CLEVELAND- AKRON (CANTON)	CBS - WOIO ABC - WEWS UPN - WUAB

HDTV and Digital Broadcast Stations Being Carried in DMA
As of March 11, 2003

PHOENIX	PBS - KAET ABC - KNXV
ORLANDO- DAYTONA BEACH-MELBOURNE	ABC – WFTV NBC – WESH CBS – WKMG FOX – WOFL PBS – WMFE WB – WKCF
PITTSBURGH	CBS - KDKA ABC - WTAE NBC - WPXI
BALTIMORE	ABC - WMAR NBC - WBAL
INDIANAPOLIS	CBS - WISH NBC - WTHR
SAN DIEGO	ABC - KGTV NBC- KNSD PBS – KPBS CBS - KFMB
CHARLOTTE	ABC – WSCO NBC – WCNC CBS – WBTV PBS – WTVI, WUNG
RALEIGH-DURHAM (FAYETTEVILLE)	ABC – WTVD NBC – WNCN CBS – WRAL FOX – WRAZ PBS – WUNC
NASHVILLE, TN	ABC – WKRN CBS – WTVF
MILWAUKEE	ABC- WISN NBC- WTMJ PBS- WMVS
CINCINNATI	ABC – WCPO NBC – WLWT CBS – WKRC
KANSAS CITY	FOX – WDAF ABC – KMBC PBS – KCPT
COLUMBUS, OH	ABC- WSYX NBC-WCMH CBS- WBNS
SAN ANTONIO	CBS – KENS

HDTV and Digital Broadcast Stations Being Carried in DMA
As of March 11, 2003

OKLAHOMA CITY	NBC- KFOR ABC- KOCO
HARRISBURG, PA	CBS – WHP NBC – WGAL PBS – WITF
LOUISVILLE, KY	ABC- WHAS PBS- KY Ed TV
LAS VEGAS	CBS - KLAS PBS - KLVX ABC - KTNV
KNOXVILLE, TN	NBC -WBIR ABC - WATE CBS - WVLT
FLINT, MI	ABC - WJRT
LEXINGTON, KY	CBS - WKYT PBS - WKLE
GREEN BAY-APPLETON	ABC – WBAY CBS – WFRV
FT. MYERS-NAPLES	ABC- WZVN NBC - WBBH
HONOLULU	ABC - KITV
PORTLAND-AUBURN	PBS – WCBB
OMAHA	CBS - KMTV PBS - KBIN
SYRACUSE	NBC – WSTM PBS – WCNY
COLUMBIA, SC	CBS – WLTX PBS – WRLK
DAVENPORT-R.ISLAND-MOLINE	ABC- WQAD
WACO-TEMPLE-BRYAN	NBC – KCEN CBS – KWTX
EVANSVILLE, IN	NBC- WFIE
YOUNGSTOWN	ABC - WYTV
BOISE	NBC - KTVB CBS - KBCI
LAFAYETTE, IN	ABC- WRTV CBS- WISH